

03–340 Removal and installation of pulley, vibration damper and balance plate

Tightening torques	Nm	(kpm)
Bolt M 18 x 1.5 x 45 to crankshaft	270–330	(27–33)
Bolts M 8 x 65	35	(3.5)

Special tools

Socket 27 mm, 1/2" drive  001 589 65 09 00

Torque wrench, 3/4" drive, 150–500 Nm (15–50 kpm)  001 589 31 21 00

Supporting lock  110 589 00 40 00

Puller for balance plate  116 589 10 33 00

Commercially available tool

Adapter, 3/4" female to 1/2" male drive e.g. Hazet, 5630 Remscheid, order No. 1058 R–1

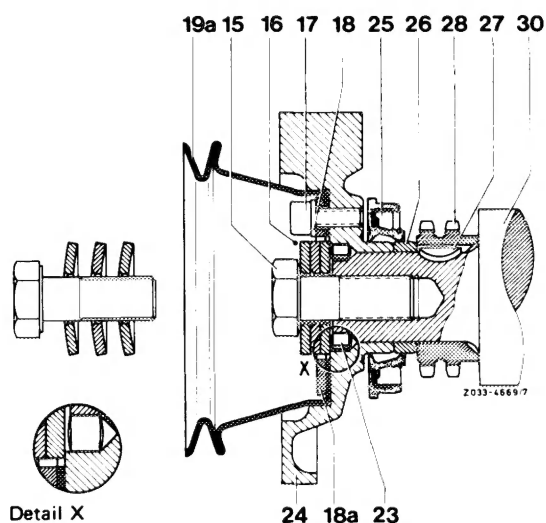
Note:

The vibration damper for engine 617 can be replaced without balancing.

Any balance plate that is replaced will have to be balanced statically (03–344).

Engines 615, 616

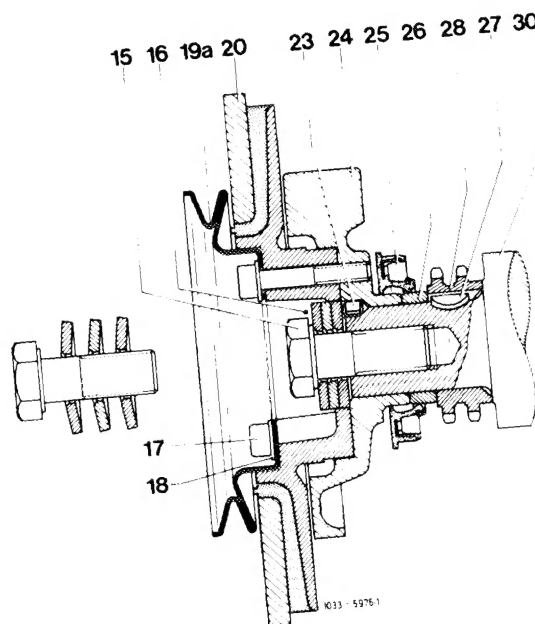
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|-------------------------|------------------------|
| 15 Bolt M 18 x 1.5 x 45 | 24 Balance plate |
| 16 Disk springs | 25 Radial seal |
| 17 Bolts M 8 x 20 | 26 Spacing ring |
| 18 Washer | 27 Woodruff key |
| 18a Thrust washer | 28 Crankshaft sprocket |
| 19a Pulley | 30 Crankshaft |
| 23 Dowel pin 8 x 8 | |



Engine 617

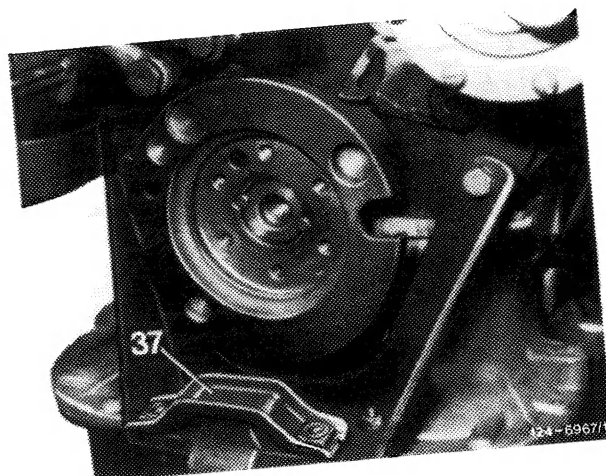
- 15 Bolt M 18 x 1.5 x 45
- 16 Disk spring
- 17 Bolt M 8 x 45
- 18 Washer
- 19a Pulley
- 20 Vibration damper
- 23 Dowel pin 8 x 8

- 24 Balance plate
- 25 Radial seal
- 26 Spacing ring
- 27 Woodruff key
- 28 Crankshaft sprocket
- 29 Crankshaft

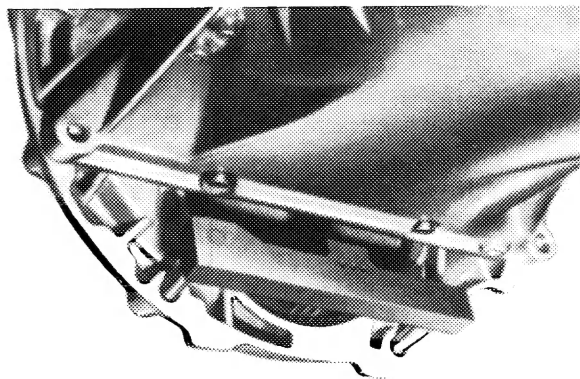


Removal

- 1 Remove radiator and fan.
- 2 Remove all V-belts (13-340).
- 3 Remove pulley.
- 4 On engine 617 remove vibration damper.
- 5 On engine 615 in type 115.1 unscrew strap (37) of front engine stop.

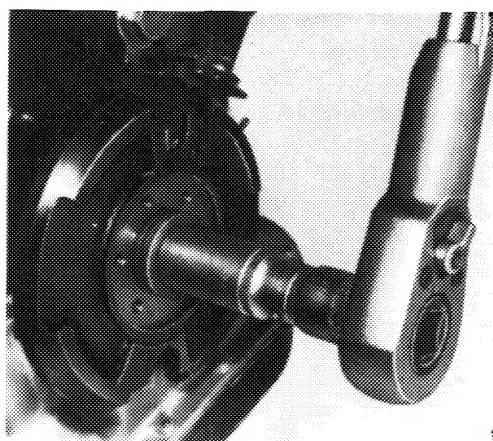


6 Apply supporting lock to flywheel.



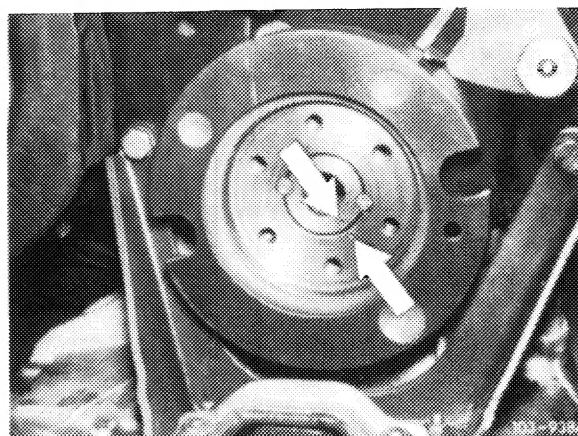
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7 Remove bolt from crankshaft.



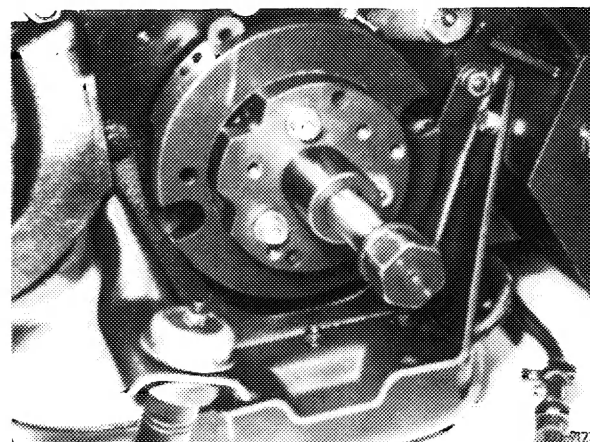
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8 Mark balance plate and crankshaft, using center punch.



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9 Remove balance plate using puller.

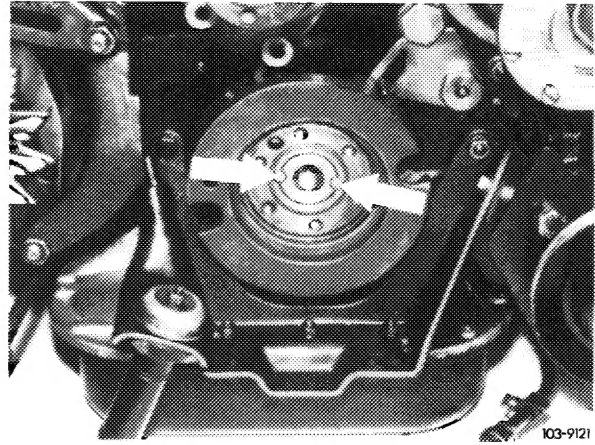


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Installation

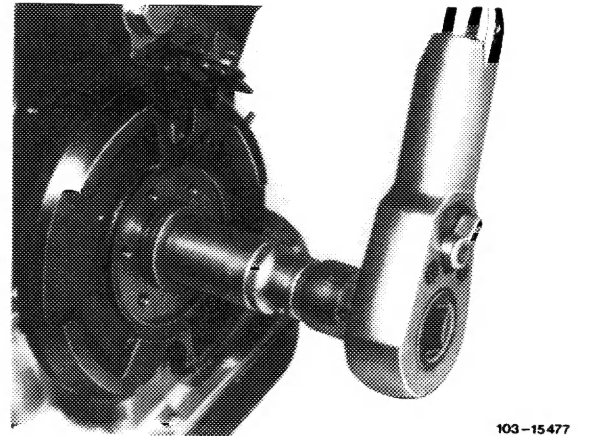
10 Position balance plate on crankshaft so that holes for dowel pins are correctly located.

Note: The balance plate is fixed on the crankshaft by two **offset** dowel pins.



11 Fit balance plate on crankshaft with bolt M 18 x 1.5 x 45 and disk springs.

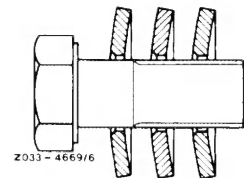
12 Drive both dowel pins home.



13 Fit three disk springs so that convex side points toward bolt head.

14 Tighten bolt on crankshaft to 270–330 Nm (27–33 kpm) securing crankshaft with supporting lock.

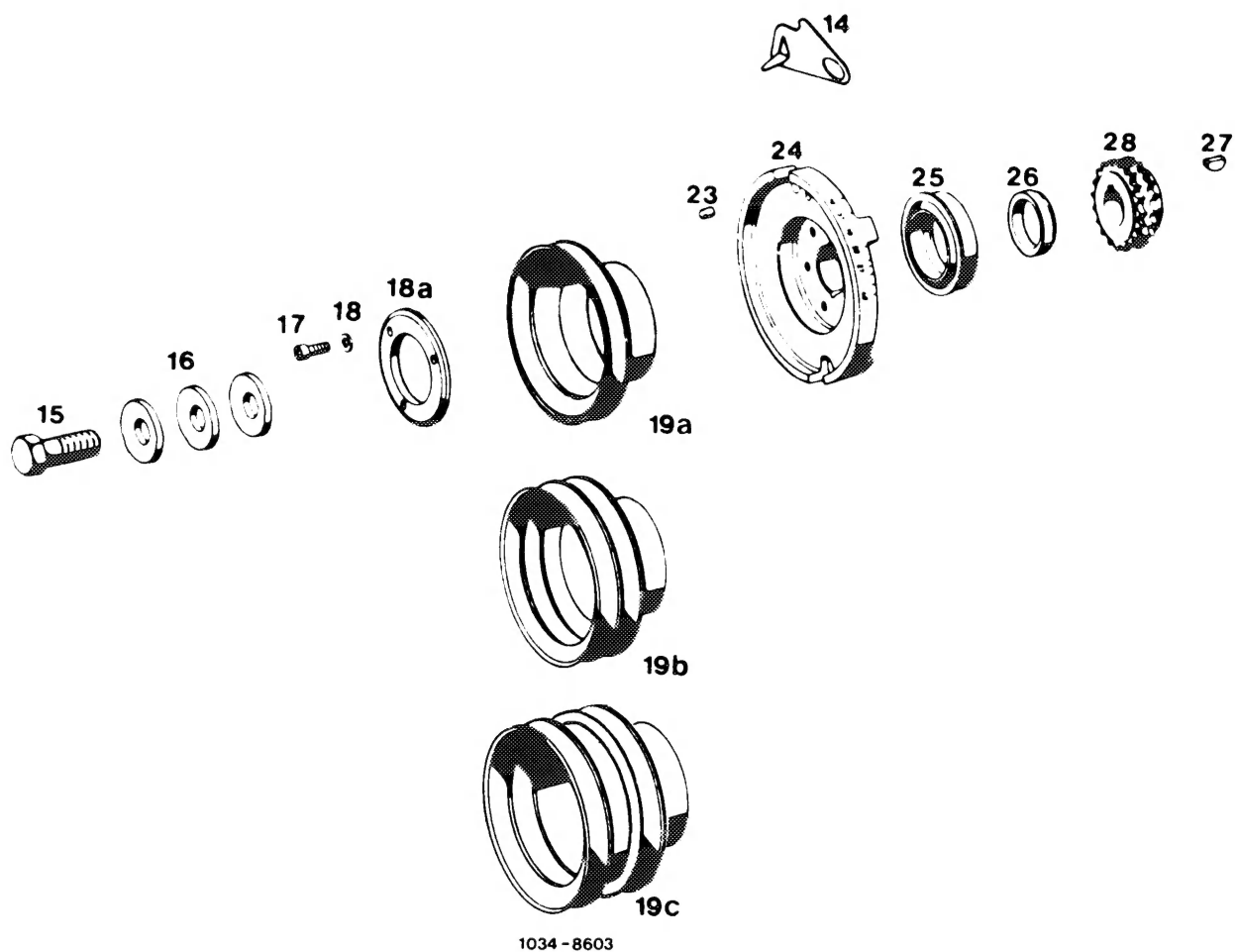
15 On engine 615 in type 115 install strap for front engine stop.



16 Install vibration damper, pulley, fan and radiator.

17 Tighten V-belts (13–340).

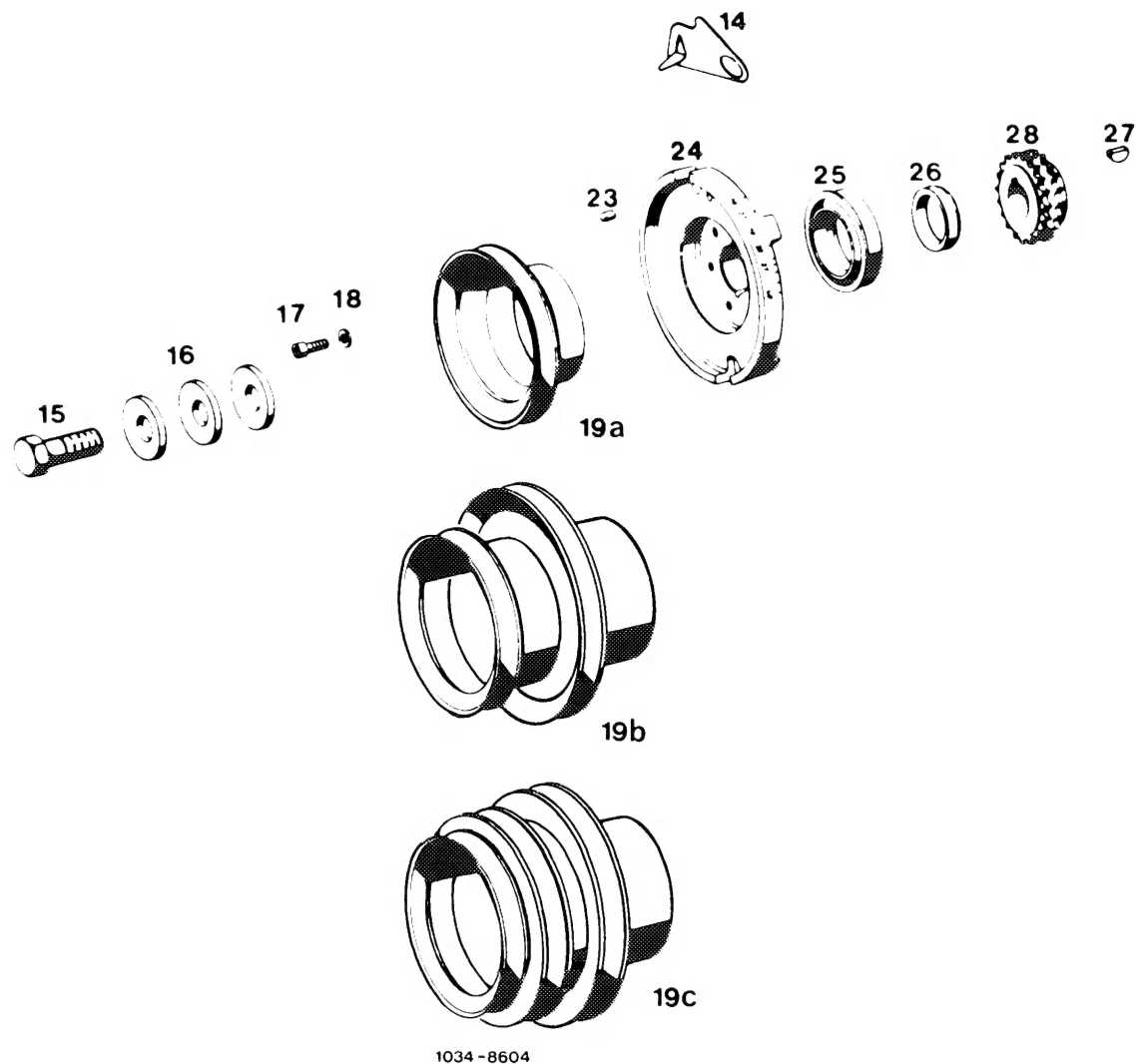
Balance plate and pulley
Engines 615 and 616 in types 115.1 and 123.1
1st version till February 1979



1034 - 8603

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|-----|--|----|---------------------|
| 14 | Timing pointer | 23 | 2 dowel pins 8 x 8 |
| 15 | Bolt M 18 x 1.5 x 45 | 24 | Balance plate |
| 16 | Disk springs | 25 | Radial seal |
| 17 | 3 bolts M 8 x 20 | 26 | Spacing ring |
| 18 | 3 washers 8.4 | 27 | Woodruff key |
| 18a | Thrust washer | 28 | Crankshaft sprocket |
| 19a | Pulley (125 mm dia. for engine 615; 150 mm dia. for engine 616) | | |
| 19b | Pulley for power steering and air conditioning in connection with pulley 19a (thrust washer 18a is omitted in this case) | | |
| 19c | Pulley for types 123.102/103/125 as well as for type 123.183 of greater payload, in connection with pulley 19a (thrust washer 18a is omitted in this case) | | |

Balance plate and pulley
Engines 615 and 616 in type 123.1
2nd version from February 1979

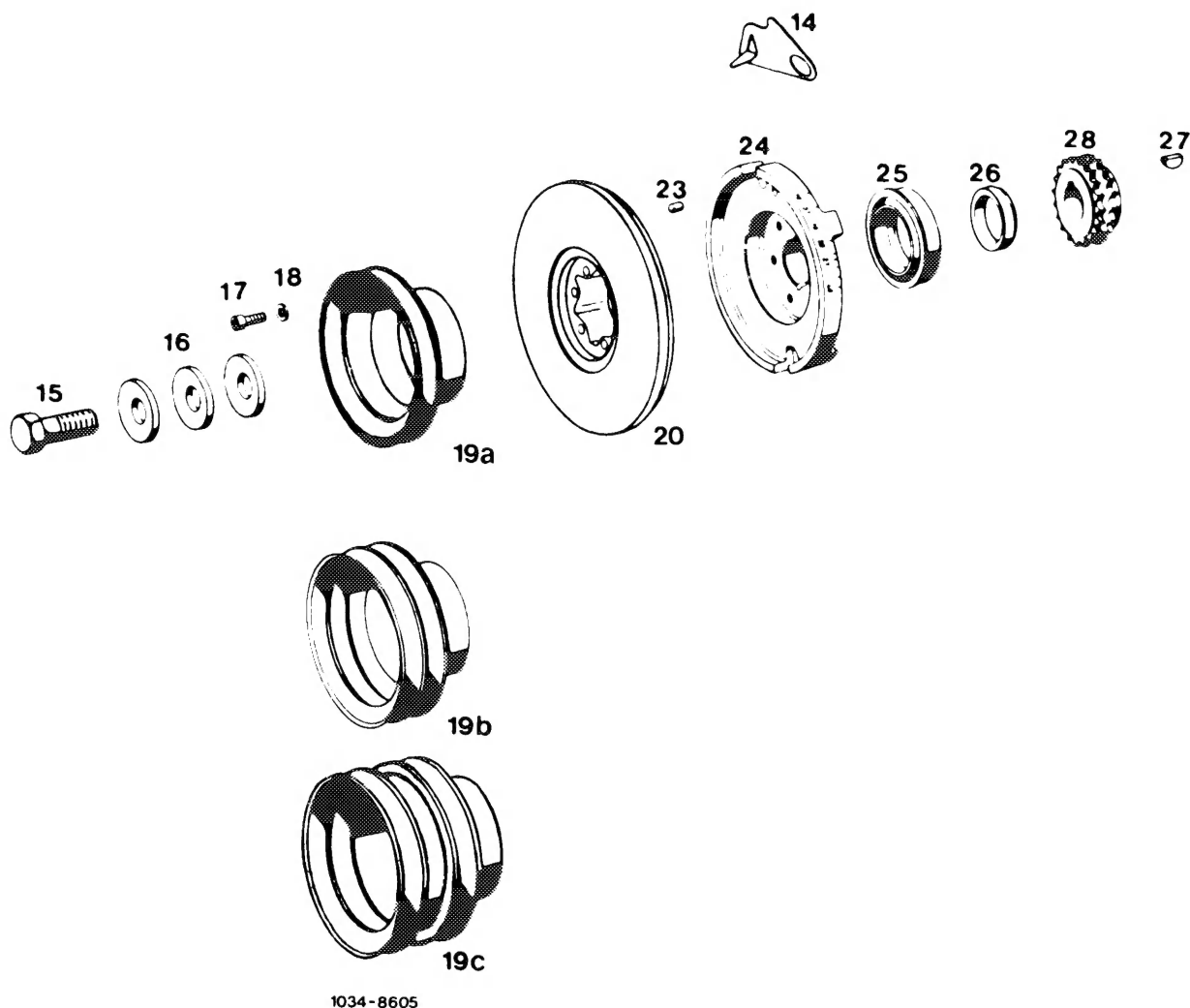


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- 14 Timing pointer
- 15 Bolt M 18 x 1.5 x 45
- 16 Disk springs
- 17 6 bolts M 8 x 20
- 18 6 washers 8.4
- 19a Pulley 161 mm dia., sectional width 12.5 mm
- 19b Pulley for power steering
- 19c Pulley for power steering and air conditioning

- 23 2 dowel pins 8 x 8
- 24 Balance plate
- 25 Radial seal
- 26 Spacing ring
- 27 Woodruff key
- 28 Crankshaft sprocket

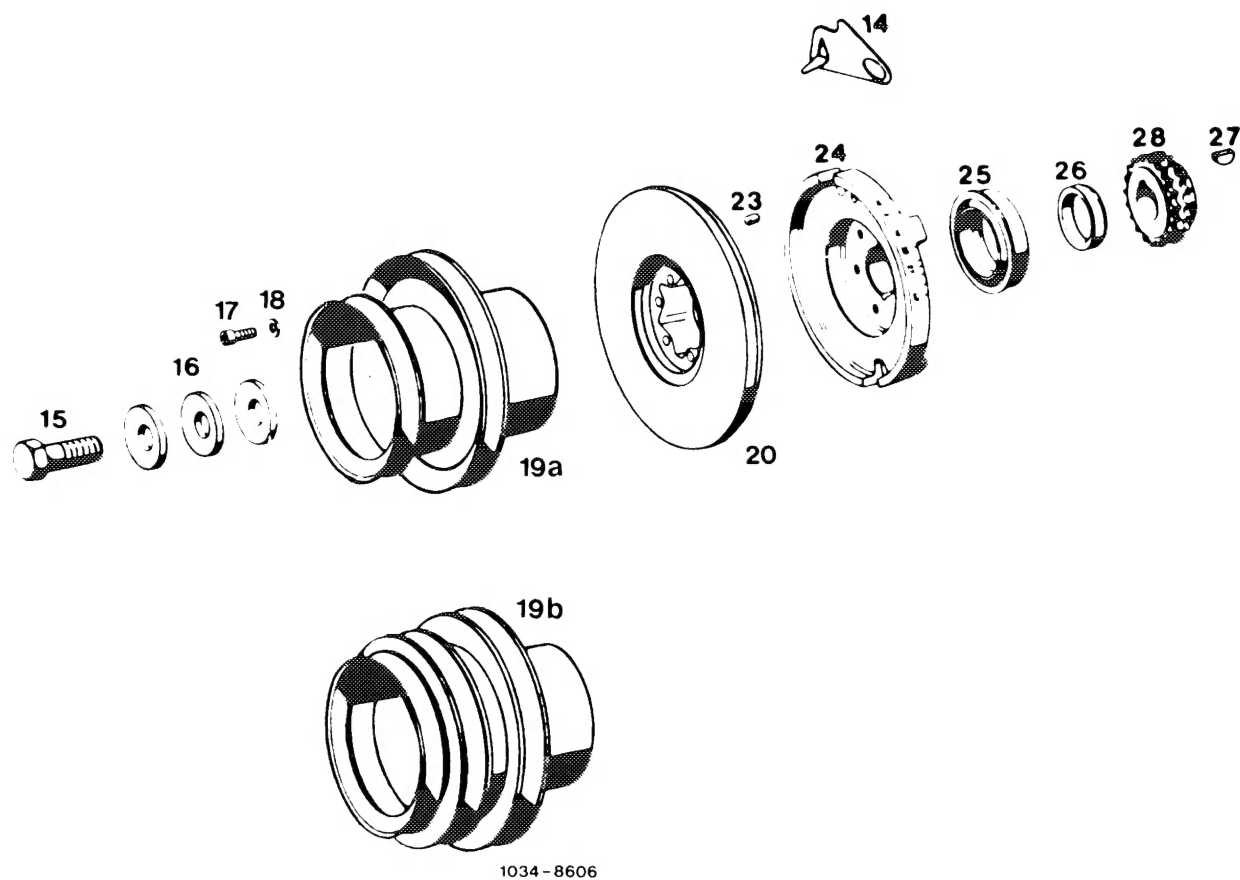
Balance plate and pulley
 Engine 617 in types 115.1 and 123.1
 1st version till February 1979



1034-8605

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|-----|--|----|---------------------|
| 14 | Timing pointer | 20 | Vibration damper |
| 15 | Bolt M 18 x 1.5 x 45 | 23 | 2 dowel pins 8 x 8 |
| 16 | Disk springs | 24 | Balance plate |
| 17 | 6 bolts M 8 x 45 | 25 | Radial seal |
| 18 | 6 washers 8.4 | 26 | Spacing ring |
| 19a | Pulley 140 mm dia. | 27 | Woodruff key |
| 19b | Pulley for power steering and air conditioning
in connection with pulley 19a | 28 | Crankshaft sprocket |
| 19c | Pulley for types 123.105/132 as well as for
type 123.190 for greater payload in connection
with pulley 19a | | |

Balance plate and pulleys
 Engine 617 in type 123.1
 2nd version form February 1979



- 14 Timing pointer
- 15 Bolt M 18 x 1.5 x 45
- 16 Disk springs
- 17 6 bolts M 8 x 45
- 18 6 washers 8.4
- 19a Pulley 161 mm dia., sectional width 12.5 mm
- 19b Pulley for air conditioning

- 20 Vibration damper
- 23 2 dowel pins 8 x 8
- 24 Balance plate
- 25 Radial seal
- 26 Spacing ring
- 27 Woodruff key
- 28 Crankshaft sprocket